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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,440	07/10/2003	Rohit Dubey	01-IND-243	4206

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EXAMINER

BRITT, CYNTHIA H

ART UNIT PAPER NUMBER

2138

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/618,440	Applicant(s) DUBEY, ROHIT	
	Examiner Cynthia Britt	Art Unit 2138	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/10/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claims 1-12 are presented for examination.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on July 10, 2003 has been considered by the examiner. Form 1449 has been signed and returned with this office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Mote, Jr.
U.S. Patent No. 5,805,609.

As per claim 1, Mote teaches a boundary scan test circuit capable of applying boundary scan test vectors to a core logic input, comprising: a multiplexing means for selectively coupling an output of a boundary scan register to an input of a boundary scan register or to the core logic input; and a selection mechanism for controlling the multiplexing means to enable the coupling when test vectors are required to be applied to the core logic input. (Abstract,)

As per claim 2, Mote teaches means to self-test the boundary scan circuit.
(Column 8 lines 52-57)

As per claim 3, Mote teaches providing a multiplexing arrangement to enable the selective coupling of the output of a boundary scan test register to the core logic input; and selectively enabling the multiplexing arrangement for coupling the output of the boundary scan test register when the test vectors are required to be applied to the core logic input. (Abstract)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mote, Jr. U.S. Patent No. 5,805,609 in view of IEEE Standard Test Access Port and Boundary Scan Architecture IEEE STD 1149.1-1990

As per claims 3 and 4, Mote substantially teaches providing a multiplexing arrangement to enable the selective coupling of the output of a boundary scan test register to the core logic input; and selectively enabling the multiplexing arrangement for coupling the output of the boundary scan test register when the test vectors are required to be applied to the core logic input. (Abstract) Not disclosed by Mote, is that the EXTEST and INTEST instructions can be run simultaneously or independently.

However, in an analogous art the IEEE 1149.1 standard teaches that this option has been designed into the standard section 7.7 (EXTEST) and 7.8 (INTEST). Therefore, it would have been obvious to a person having ordinary skill in the art at the time this invention was made to have used the IEEE standard with the test circuit of Mote. This would have been obvious as suggested by Mote (column 1 lines 25-28) as the JTAG interface is used.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 6, the phrase "...first and second capture registers coupled to the first and second multiplexers..." is unclear. Clarification is required for the examiner to understand if each of the 'first and second capture registers' is/are 'connected to each of the first and second multiplexers or if they are connected respectively.

Also in claim 6, the phrase "...first and second update registers coupled to the first and second capture registers..." is unclear. Clarification is required for the examiner to understand if each of the 'first and second update registers' is/are coupled to each of 'the first and second capture registers' or if they are connected respectively.

Also in claim 6, the phrases "...third and fourth multiplexers coupled to the first and second update registers for receiving a mode control signal...", "...a buffer section coupled to the third and fourth multiplexers and to a pad..." are unclear for the reasons stated above. The examiner would like to point out that this type of claim must be specific in claim language in order to *particularly point out and distinctly claim the subject matter which applicant regards as the invention*.

As per claims 7-12, these claims are dependent on independent claim 6 and therefore inherit the 35 U.S.C. 112, second paragraph issues of the independent claim 6 and will not be further considered on their merits.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 6,314,539 Jacobson et al.

This patent teaches boundary scan compliant with JTAG and using multiplexers to selective route test data.

U. S. Patent No. 5,715,255 Whetsel

This patent teaches boundary scan registers (memory) connected between the functional logic and the external terminals.

U. S. Patent No. 6,028,983 Jaber

This patent teaches boundary scan compliant with JTAG and using multiplexers to selective route test data.

U. S. Patent No. 5,828,824 Swoboda

This patent teaches boundary scan testing for multiple modules using multiplexing.

U. S. Patent No. 6,304,987 Whetsel

This patent teaches boundary scan testing of boards in which internal tests and external test can be preformed simultaneously.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Britt whose telephone number is 571-272-3815. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Cynthia Britt
Examiner
Art Unit 2138